

January 28, 2004

HARVEL PLASTICS, INC.
WILLIAM P. WEAVER
300 KUEBLER RD
EASTON PA 18040

Re: Description: PIPE, FITTINGS AND CEMENT, ALTERNATE PLUMBING SYSTEM
Manufacturer: HARVEL PLASTICS, INC.
Product Name: LXT PVC SCH 80 PIPE AND FITTINGS WITH HARVEL LXT ONE-STEP CEMENT
Model Number(s): PIPE: 1/2, 1, 1, 1-1/4, 1-1/2, 2, 3, 4, AND 6
FITTINGS: TEE (SlipxSlipxSlip), 1/2, 1, 1, 1-1/4, 1-1/2, 2, 3, 4, 6; REDUCING TEE (SlipxSlipxSlip) 1x1x1, 1-1/2x1-1/2x1, 2x2x1, 2x2x1-1/2, 3x3, 2, 4x4x3, 6x6x3, 6x6x4; 90 deg. ELL (SlipxSlip) 1/2, 1, 1, 1-1/4, 1-1/2, 2, 3, 4, 6; 45 deg. ELL (SlipxSlip) 1/2, 1, 1, 1-1/4, 1-1/2, 2, 3, 4, 6; COUPLING (SlipxSlip), 1/2, 1, 1, 1-1/4, 1-1/2, 2, 3, 4, 6; REDUCER COUPLING (SlipxSlip), 1x1/2, 1x1, 1-1/4x1, 1-1/2x1, 1-1/2x1-1/4, 2x1, 2x1-1/2, 3x2, 4x2, 4x3, 6x4; FEMALE ADAPTER (SlipxFipt) 1/2, 1, 1, 1-1/4, 1-1/2, 2, 3, 4; MALE ADAPTER (MiptXSlip) 1/2, 1, 1, 1-1/4, 1-1/2, 2, 3, 4; REDUCER BUSHING (SpigxSlip) 1x1/2, 1x1/2, 1x1, 1-1/4x1/2, 1-1/2x1, 1-1/2x1-1/4, 2x1, 2x1-1/2, 3x2, 4x3, 6x4; REDUCER BUSHING FLUSH STYLE (SpigxFipt) 1/2x1/4, 1/2x3/8, 1x1/4, 1x1/2, 1x3/8, 1x1/2, 1x1; REDUCING FEMALE ADAPTER (SpigX SR Fipt) 1/2x1/4, 1x1/4, 1x1/4; CAP (Slip) 1/2, 1, 1, 1-1/4, 1-1/2, 2, 3, 4, 6; FLANGE (Slip) Van Stone Style 1/2, 1, 1, 1-1/4, 1-1/2, 2, 3, 4, 6; UNION (Slip x Slip) EPDM and VITON O-Ring Seal, 1/2, 1, 1, 1-1/4, 1-1/2, 2, 3, 4; TANK ADAPTERS EPDM GASKET (Soc x Fipt) 1/2, 1, 1, 1-1/4, 1-1/2, 2, 3, 4; DIAPHRAGM VALVES 1/2, 1, 1, 1-1/4, 1-1/2, 2; SAFE BLOCK BALL VALVES (EPDM and VITON O-RINGS) 1/2, 1, 1, 1-1/4, 1-1/2, 2, 3, 4; CHECK VALVES (EPDM and VITON O-RINGS) 1/2, 1, 1, 1-1/4, 1-1/2, 2, 3, 4 CEMENT, HARVEL LXT ONE-STEP
Product File No: 20030552

The specifications and/or plans for this plumbing product have been reviewed and determined to be in compliance with chapters Comm 82 through 84, Wisconsin Administrative Code, and Chapters 145 and 160, Wisconsin Statutes.

The Department hereby issues an alternate approval to s. Comm 84.30 (4)(e)1 and (4)(i)2e based on the Wisconsin Statutes and the Wisconsin Administrative Code. This approval is valid until the end of January 2009.

This alternate approval is contingent upon compliance with the following stipulation(s):

- This product may be installed for the following water use(s):
 - a. Water service pipe
 - b. Cold water distribution piping Above ground
 - c. Cold water distribution piping Underground
- This product must be installed in accordance with the manufacturer's printed instructions, product approval, and plan approval. If there is a conflict between the manufacturer's instructions and the product approval and/or plan approval, the product approval and/or plan approval will take precedence.
- Pipe sizing for this product must comply with Tables HLXT-1 or 2 entitled Maximum Allowable Load for Harvel LXT PVC, Sch. 80; (C=150). Table notes: WSFU means water supply fixture units, GPM means gallons per minute, FM means predominately flushometer type water closets or syphon jet urinals, FT means predominately

flush tank type water closets or wash down urinals, and NP means not permitted.

TABLE HLXT-1
Maximum Allowable Load for Harvel LXT PVC, Sch. 80; (C=150)

Pressure Loss Due to Friction (in lbs. per 100 ft. of Length)	Pipe Diameter (in Inches)									
	1/2		3/4		1			1-1/4		
	WSFU		WSFU		WSFU			WSFU		
	GPM	FT	GPM	FT	GPM	FM	FT	GPM	FM	FT
0.5	0.5	0.5	1.5	1.5	3.0	-	3.0	6.5	-	8.0
1	1.0	1.0	2.0	2.0	4.5	-	5.0	10.0	4.0	13.0
2	1.0	1.0	3.0	3.0	6.5	-	8.0	14.5	4.5	20.5
3	1.5	1.5	4.0	4.0	8.0	-	10.0	18.0	6.0	26.5
4	2.0	2.0	5.0	6.0	9.5	-	12.5	21.0	7.0	32.0
5	2.0	2.0	5.5	6.5	11.0	4.0	15.0	23.0	7.5	37.0
6	2.5	2.5	6.0	7.0	12.0	4.0	16.5	26.0	9.0	45.0
7	2.5	2.5	6.5	8.0	13.0	4.5	18.0	28.0	11.0	50.0
8	3.0	3.0	7.0	9.0	14.0	4.5	20.0	30.0	14.5	57.0
9	3.0	3.0	7.5	9.5	15.0	5.0	21.5	NP		
10	3.5	3.5	8.0	10.0	16.0	5.0	23.0			
11	3.5	3.5	8.5	10.5	16.5	5.5	24.0			
12	3.5	3.5	9.0	11.5	17.0	5.5	25.0			
13	4.0	4.0	9.0	11.5	NP					
14	4.0	4.0	9.5	12.5						
15	4.0	4.0	10.0	13.0						
16	4.5	5.0	10.0	13.5						
17	4.5	5.0	NP							
18	4.5	5.0								
19	5.0	6.0								
20	NP									

- Pipe sizing for this product must comply with Tables HLXT-1 or 2 entitled Maximum Allowable Load for Harvel LXT PVC, Sch. 80; (C=150). Table notes: WSFU means water supply fixture units, GPM means gallons per minute, FM means predominately flushometer type water closets or syphon jet urinals, FT means predominately flush tank type water closets or wash down urinals, and NP means not permitted.

TABLE HLXT-2
Maximum Allowable Load for Harvel LXT PVC, Sch. 80; (C=150)

Pressure Loss Due to Friction (in lbs. per 100 ft. of Length)	Pipe Diameter (in Inches)								
	1-1/2			2			3		
	WSFU			WSFU			WSFU		
	GPM	FM	FT	GPM	FM	FT	GPM	FM	FT
0.5	10.5	4.0	14.0	20.5	6.5	31.0	60.0	75.0	175
1	15.0	5.0	21.5	30.0	13.5	55.0	87.0	180.0	310
2	22.0	7.0	35.0	44.0	36.0	106.0	127.0	406.0	511
3	27.0	10.0	47.0	55.0	62.0	150.0	159.0	615.0	688
4	32.0	16.0	60.0	64.0	86.0	195.0	160.0	627.0	697
5	36.0	22.0	73.0	71.0	114.0	233.0	NP		
6	40.0	30.0	86.0	NP					
7	42.0	34.0	102.0						
8	NP								
	4			6					
	WSFU			WSFU					

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	GPM	FM	FT	GPM	FM	FT
0.5	125	393	500	369	2444	2444
1	183	800	829	537	4176	4176
2	266	1490	1490	636	5935	5965
3	280	1626	1626	NP		
4	NP					

- This product must be installed in accordance with Harvel's installation instructions printed in the Harvel LXT HPB-114, Revised 5/15/02, product brochure.
- The piping must be labeled with HARVEL LXT, pipe size in inches, SCH 80, and Trace number (i.e.: 6 2303 1).
- The fittings must be labeled with Spears, NSF pw PVC1, pipe size in inches, SCH 80, and part number.

This approval supersedes the approval issued on INSERT DATE under product file number 20030517.

The department is in no way endorsing this product or any advertising, and is not responsible for any situation which may result from its use.

Sincerely,

Michael J. Beckwith, CIPE
Plumbing Product Reviewer
phone: 608-266-6742
fax: 608-267-9566
e-mail: mike.beckwith@wi.gov